Appl. No.: 10/531,931 Docket No.: 348162-982360 Rule 312 Amendment

Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-14. cancelled

15. (previously presented) An image processing unit for computing a sequence of output

images on basis of a sequence of input images, comprising:

- a motion estimation unit for computing a motion vector field on basis of the input

images, the motion vector field comprising motion vectors, wherein each of the motion

vectors belongs to a group of pixels;

- a quality measurement unit for computing a value of a quality measure for the motion

vector field;

- an interpolation unit for computing a first one of the output images by means of

interpolation of pixel values of the input images, the interpolation being based on the motion

vector field; and

- control means to control the interpolation unit on basis of the quality measure,

characterized in that the quality measurement unit is arranged to compute the value of the quality

measure on basis of the maximum of the differences between the motion vector,

wherein the motion estimation unit, the quality measurement unit, the interpolation unit, and the control means are implemented using a processor.

16. (previously presented) An image processing unit as claimed in claim 15, wherein the

group of pixels of one of the motion vectors is a neighboring group of pixels of the

groups of pixels of the rest of the motion vectors.

17-18 cancelled

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19. (previously presented) An image processing unit as claimed in claim 15, characterized in

that the interpolation unit comprises a motion compensated interpolator to perform the motion

compensated interpolation of the pixel values of the input images on the basis of the motion

vector field, a non-motion compensated interpolator to perform the alternative interpolation of

the pixel values of the input images, and a switch coupled to the motion compensated interpolator

and the non-motion compensated interpolator, wherein the switch is controlled by the control

means.

20. (previously presented) An image processing unit as claimed in claim 15, characterized in

that the interpolation unit mixes intermediate images from the motion compensated interpolation

and from the alternative interpolation.

21. (previously presented) An image processing unit as claimed in claim 20, characterized in

that the interpolation unit comprises a motion compensated interpolator to perform the motion

compensated interpolation of the pixel values of the input images on the basis of the motion vector field, a non-motion compensated interpolator to perform the alternative interpolation of the

pixel values of the input images, two multipliers that are controlled by the control means, and an

adding unit.

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